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THOUGHT AND LANGUAGE.

HAVE read with interest Prof. Max Müller's paper on the above subject in the current issue of *The Monist*, not only because it is in large part devoted to a consideration of my own work on "Mental Evolution," but still more because the explanations which it supplies touching certain points of disagreement between us appear to show that I have not misrepresented his statements, even if, as he alleges, I have misapprehended his meanings.

The work to which allusion has just been made was published in 1888, and, as far as I am aware, it is only now that Prof. Max Müller has sought to meet my views as there expressed. Hence we may take it that his answer is, at all events, well matured. Furthermore, we may take it, from the tone in which his answer is conveyed, that he credits me with having had at least an honest desire to understand, and accurately to represent, his meaning in all the places where I have ventured to criticise it. It appears, however, that at all events in one important respect I have betrayed "a complete misapprehension" of his meaning—viz. with reference to his "theory of the origin of roots" (*The Monist*, p. 582); and it is for the purpose of correcting this misapprehension that he has published the latter half of his present paper. My reply, therefore, must take the form of excusing myself for the complete misapprehensions which are alleged.

It is desirable at the outset to emphasise a distinction which I was careful to draw in my work on "Mental Evolution in Man"—that, namely, between philology and philosophy. A man may be an excellent authority on the "Science of Language," and yet but

a very indifferent writer on the "Science of Thought." On the other hand, a man may know nothing at first hand touching the special province of a philologist, and nevertheless be fully capable of criticising what a philologist has published in the way of theoretical deductions from his facts—especially where these deductions quit the sphere of philology, and soar into that of Darwinian, or anti-Darwinian, speculation. This distinction, indeed, between the particular science of philology and the general scope of philosophy, Prof. Max Müller himself recognises where he says: "While the student of language seems to me to have a perfect right to treat the roots of language as ultimate facts, it is difficult for the philosopher not to look beyond." (The Monist, p. 579.) Nevertheless he complains of me because, while accepting all his philological facts upon his authority as a philologist (save in so far as they are not accepted by other philologists), I have been obliged to express dissent from not a few of his theoretical deductions—especially, as I have already indicated, where these have reference to the general doctrine of evolution as applied to the mind of man. But how, I may ask, could a treatise be written on "Mental Evolution in Man," or "The Origin of Human Faculty," without considering the results which have been gained by the science of comparative philology? Or how can it be maintained that, in order to deal with these results in relation to the general theory of descent, a writer must first of all himself become an authority in that particular science? At any rate, I deemed it enough for the only purposes which I had in view, to read attentively all the leading authorities in this science, and, after extracting from them the information upon matters of fact which their researches had established, to show what I regarded as the bearing of these facts upon the theory of mental evolution. Nor can I plead guilty to the charge of arrogant presumption, which the following words appear to convey:

"We see in his case how dangerous it is for a man who can claim to speak with authority on his own special subject, to venture to speak with authority on subjects not his own. Professor Romanes has, no doubt, read several books on philology and philosophy, but he is not sufficiently master of his subject to have the slightest right to speak of men like Noiré, Huxley, Herbert Spencer, to say nothing of

Hobbes, with an air of superiority. That is entirely out of place." (The Monist, p. 383.)

Now that any such "air of superiority" occurs in my book, I must deny—and this is a matter of fact. Noiré is alluded to only with reference to his theory of the origin of language, which I go further in accepting than does any "philosopher" or "philologist," with the single exception of Prof. Max Müller himself. Huxley is mentioned in several places as a leading authority on anatomical matters, where my argument requires an authoritative statement upon them. Herbert Spencer, curiously enough, is never mentioned at all; while Hobbes is named only once, and then as sustaining, by a "shrewd analysis," an opinion which I am advocating by quotations from recognised authorities in philosophy. Truly, therefore, it would be well for my critic "to say nothing of Hobbes"; and better still if he had looked at my index before condemning my supposed treatment of Herbert Spencer, Huxley, and Noiré. As it is, his allusion to these names "is entirely out of place."

But even apart from this particularly unfortunate allusion, his more general charge as to my "venturing to speak authoritatively on subjects not his [my] own," is equally out of place. The following is my introduction to the chapter on Comparative Philology, and I cannot see that it betokens any "air of superiority":

"In now turning to this important branch of my subject, I may remark, in limine, that, like all the sciences, philology can be cultivated only by those who devote themselves specially to the purpose. My function, therefore, will here be that of merely putting together the main results of philological research, so far as this has hitherto proceeded, and so far as these results appear to me to have any bearing upon the 'origin of human faculty.' Being thus myself obliged to rely upon authority, where I find that authorities are in conflict, I will either avoid the points of disagreement, or else state what has to be said on both sides of the question. But where I find that all competent authorities are in substantial agreement, I will not burden my exposition by tautological quotations."

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Having thus disposed of a merely personal matter, I may pass on to my justification of the "complete misapprehension" into which I have fallen with respect to Prof. Max Müller's work on the "Science of Thought."

In the first place he tells us:

"On page 267 Mr. Romanes says that I profess, as a result of more recent researches, to have reduced the number of Sanskrit roots to 121. I wish I had. But the number of roots in Sanskrit stands as yet at about 800: the number 121 of which he speaks is the number of concepts expressed by these roots, many of them conveying the same, or nearly the same, idea." (The Monist, p. 583.)

Now it is quite true that on page 267 I made the statement which is here challenged; but as I immediately go on to speak repeatedly of the "number 121" as being "the number of concepts expressed by the roots,"—and actually quote at length the whole 121 concepts with Prof. Max Müller's own heading,—I am not sure that the point is worth the stress which is now laid upon it. ertheless, I may explain why in this one passage I used the word "roots," instead of the word "concepts." Briefly, the only reason was because, according to Prof. Max Muller's theory of the origin of roots, it seemed to me virtually the same thing, from a psychological point of view, whether we speak of the reduction in question as pertaining to roots or to concepts. For, according to the theory, "every root embodies a concept," or is the obverse side of a concept. Consequently, if the Sanskrit language presents some 800 roots, while it is expressive of only 121 concepts, the balance of the 800 roots must be concerned in conveying the same, or nearly the same, ideas—as Prof. Max Müller himself expressly asserts in the above quotation from The Monist. Indeed, the whole object of his psychological analysis of linguistic roots was to prove that such is the case; and, therefore, that the 121 roots which serve to convey the 121 concepts are the only roots required for the purposes of communication in Sanskrit speech. No doubt it would have been better if I had stated all this in my book; but even if its omission led to obscurity, I can scarcely see that on this account there could have been a "misrepresentation" where there was certainly no "misapprehension." For, as already stated, I spoke of "121 roots" only once, while I alluded to "121 concepts" many times—and usually, moreover, in inverted commas. Lastly, it may be observed that, following his theory concerning the "origin of roots," Prof. Max Müller himself so far identifies roots with concepts as to

head one of his lists, in large capitals—ROOTS OR CONCEPTS. Therefore in saying that he professed to have reduced the psychologically efficient elements of Sanskrit speech to 121 constituents, it did not appear to me that I was departing from his own terminology when in one passage I spoke of these 121 constituents as roots, while everywhere else I spoke of them as concepts. us," he says, "about 800 roots, and we can explain the largest dictionary; give us about 121 concepts, and we can account for the 800 roots." ("Science of Thought," p. 551.) Well, if this is so, the 800 roots (i. e. phonetically separable elements) have been reduced to the 121 "concepts or roots" (i. e. psychologically separable elements). My critic cannot both have his cake and eat it. Either he must abide by the philological meaning of a root, as the ultimate result of philological analysis; or else he must abide by his own philosophical meaning of a root, as the embodiment of a concept. Under the former definition there will be about 800 roots of Sanskrit; under the latter definition, and according to his analysis, there will be only 121.

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The next point with regard to which "complete misapprehension" is alleged may best be presented by my critic's own words, thus:

"Professor Romanes thinks it necessary to remark that 'these concepts do not represent the ideation of primitive man'! I never said they did. I never pretended to be acquainted with the ideation of primitive man. All I maintained was that, making allowance for obscure words, every thought, that of the lowest savage as well as of the most minute philosopher, can be expressed with these 800 roots, and traced back to these 121 concepts." (The Monist, p. 584.)

Now, it is perhaps needless to say, I am extremely glad to learn that such was the meaning intended; but I trust that the following quotations will furnish a sufficient excuse for my misunderstanding of it:

"I hope that those who will carefully examine the results at which I have arrived, will admit that they prove by overwhelming evidence that the meanings of roots are really what we expected them to be, and that they express the primitive social acts of primitive social man, and the states more or less closely associated with such acts." ("Science of Thought," p. 403.)

From this it appears that if Prof. Max Müller never professed to be acquainted with the ideation of *primitive* man, he did profess to have proved, by overwhelming evidence, a very large acquaintance, not only with the ideation, but also with primitive acts of primitive *social* man. Possibly his acquaintance with both these matters is very much more intimate than mine; but as I have always taken it to be virtually certain that "primitive man" was "social" in his habits, I should like to learn the reasons which have induced my critic to believe in a still more "primitive man," who was addicted to a solitary mode of life. For, otherwise, the only distinction on which his criticism appears to rest is a distinction without a difference.

Again he says:

"The Science of Thought assures us that every thought that ever crossed the mind of man can be traced back to about 121 simple concepts." (Ibid, p. 418.)

And that the word "man" here is not intended tacitly to exclude "primitive man" (whether "social" or solitary), I gathered from the fact of the 121 concepts in question being tabulated under the heading, in large capitals, THE 121 ORIGINAL CONCEPTS. For, if the word "original" here was intended to mean original only with reference to the Sanskrit language, why did the writer follow it up with his statement about the Science of Thought, assuring us that every thought which had ever crossed the mind of man could be traced back to these 121 original concepts?

Lastly, not only by such particular passages was I led to suppose that the writer was referring to "primitive man" when he was writing about "primitive social man," etc.; but still more was I led to suppose this by the whole drift and tenor of his work. For what would be the sense of all his disquisitions upon the importance of linguistic science in its relation to the theory of evolution, if he intended to restrict his inferences to the semi-civilised condition of man, which (as he allows) must have been the condition of the speakers of Sanskrit? Clearly, if this were his intention, there would have been no sense in all these disquisitions; and therefore, here again, my critic cannot both preserve his cake and consume it. Either let him adopt the position which he takes up in The Monist, as a

philologist pure and simple, who "never pretended to be acquainted with the ideation of primitive man," who refuses to go beyond the "facts" of the "Science of Language," or to speculate upon their theoretical relations to the "Science of Thought": or else let him do as he does in his published works—superimpose upon his functions as a "Student of Language" the functions of a "Philosopher," freely speculate upon "the origin of roots," elaborately argue the whole psychology of "concepts," and strenuously endeavor to show that "language is the Rubicon of mind," which not only now, but at all times, has separated man from the lower animals, as a being mysterious in origin, if not unique in kind.

Next we are told:

"Professor Romanes dwells on what he calls the interesting feature of all roots being verbs. This is simply a contradiction in terms. In giving the meaning of roots scholars generally employ the infinitive or the participle, "to go," or "going"; but they have stated again and again that a root ceases to be a root as soon as it is used in a sentence." (The Monist, p. 584.)

Now, by a "verb" I understand a word that signifies either an action or a state; and by a "root" I understand—here agreeing with Prof. Max Müller himself—"an element of human speech," so far as this has been hitherto reduced by philological analysis. Again, I hold—in this also agreeing with him—that "as soon as a root is used for predication it becomes a word, whether outwardly it is changed or not." ("Science of Thought," p. 440.) Well, if we are agreed upon these points, I do not see how there can be any "contradiction in terms" when I stated the fact "of all roots being verbs."

In the first place, if one were to agree with Prof. Max Müller himself in holding that originally every root was "something real, something that was actually used in conversation" (Ibid. p. 420), there can be no contradiction in terms if we translate this into saying that originally every root was a word—for the mere quibble that not until it was spoken did the root become a word does not affect the matter, any more than if we were to say the same of any word now in use, which has given birth to a progeny of other words. But even if we disagree with Prof. Max Müller, and suppose that roots

are merely "phonetic elements," or the residual extract of a group of originally allied words, we should still be correct in saying that the "concepts" which they "embody" are all concepts which now admit of being expressed in equivalent words.

So much for the "contradiction in terms," which is alleged to arise if we speak of roots as words. Touching the second point, or the accuracy of saying that the words which roots express are always verbs, my defence is sufficiently easy. For to say, as my critic says, that "in giving the meaning of roots scholars generally employ the infinitive or the participle," appears to me a most unphilosophical observation, since it appears to indicate that in the opinion of its writer the significance of a verb is but conventionally given to a root by the verbal form into which it is thrown by scholars. But the fact is that, even if they tried, scholars could rarely deprive a root of its significance as a verb, no matter into what verbal form they might choose to throw it. Take any root at random, such as HA to go. However much we may ring the changes, as "to go," "going," "goer," it is impossible to get rid of the fundamental significance of the root as a verb. And although it is, of course, possible to select a root which presents a more equivocal interpretation, the cases in which this can be done are, comparatively speaking, not numerous, and apparently never such as to exclude the probability of its having primarily conveyed the force of a verb. For instance, HUR to fall, may be regarded either as a verb or a noun-substantive; but we cannot say that there is anything to render more probable the view of the root having been originally expressive of a fall than of the act of falling; and inasmuch as there do not appear to be any roots which can only have originally had the force of nouns or adjectives, while there are so many which can only have originally had the force of verbs, we may fairly conclude that in the accidentally more equivocal cases the roots were likewise originally expressive of actions or of states. For, if not, why are there not as many roots which convey such meanings as sky, or blue (which never can have had equivalents in the forms of verbs), as there are roots like HA, where we cannot doubt that the meaning from the first must have been the meaning of a verb?

I am the more surprised at this head of Prof. Max Müller's criticism, because it belongs to the very essence of his own theory touching "the origin of roots," that they *must* all originally have conveyed the meaning of verbs. Therefore from end to end of his own book he constantly alludes to roots as expressive of "actions"; never as expressive of objects or qualities. For instance:

"All, or nearly all, the roots of Sanskrit, or rather of the Aryan family in general, express, as we shall see, acts, and more particularly the commonest acts performed by members of a primitive society." ("Science of Thought," p. 272.)

And even in *The Monist* article itself the same thing is stated thus:

"Let us remember that a most careful psychological analysis had led Noiré to the conclusion that the germs of all conceptional thought were to be found in the consciousness of our own repeated acts. And let us place by the side of this, the well-ascertained fact that the germs of all conceptional language, what we call roots, express with few exceptions the repeated acts of men." (The Monist, p. 580.)

Again:

"We begin with the fact that the great bulk of a language consists of words, derived, according to the strictest rules, not from cries, but from articulate roots. No one denies this. We follow this up with a second fact, that nearly all the roots express acts of men. No one denies that." (p. 588.)

Very well then, I submit that the only real distinction between Prof. Max Müller's rendering of this "fact," and my own rendering of it, consists in my having added "states" to "acts," and observing that then the comparatively few outstanding roots may be included with the "nearly all" under the one category of "verbs."

For the distinction which he draws in *The Monist* is not a real distinction: it is merely a verbal distinction.

Here it is:

"If Professor Romanes approves of my saying that roots stood for any part of speech, just as the monosyllabic expressions of children do, I can only say that, if I ever said so, I expressed myself incorrectly. A root never stands for any part of speech, because as soon as it is a part of speech it is no longer a root." (*The Monist*, p. 585.)

This, as I have previously observed, is merely a quibble. If originally every root was "something real, something used in conversation," originally all roots were words, in just the same sense

as "the monosyllabic expressions of children" are words. And if "nearly all these roots express the acts of man," while most (if not all) the outstanding residuum were apparently expressive of states, it follows that the roots in question were not only words, but verbs. And in stating this "fact" I supposed that I was but following Prof. Max Müller's statement of it, where he constitutes it the philological basis of his theory on the "origin of roots"—viz. that all roots sprang from sounds made by "primitive social man" when engaged in their "social acts." But, while accepting this fact, I objected to the theory raised upon it, because the latter did not consider that roots which originally had the force of verbs must have been more likely to have survived, and so to have come down to us, than those which may originally have had the significance of any other parts of speech. And it was only in order to supply this further consideration that I alluded to the "fact" at all.

* *

We come next to some disparaging remarks upon "babies," "parrots," and the lower animals generally (*The Monist*, pp. 586-7). Prof. Max Müller "refuses to argue" with me, "or any other philosopher, either in the nursery or the menagerie." So be it. As a philologist, of course, he is assuredly right; no one would expect him so to argue. But as a philosopher, who has written a large book on the "Science of Thought," he is no less assuredly wrong. And one may be pardoned for wondering at this intentionally ostrichlike attitude on the part of a philosopher—who is "going beyond the origin of roots"—with respect to the fundamental germs of the signmaking faculty.

Again, my critic appears to imagine that I am a supporter of the onomatopoetic theory—to the extent of regarding all human language as having originated in imitations of natural sounds. (The Monist, pp. 586-7.) But over and over again I have stated that this is not my view. I believe, indeed, that there is a very large amount of truth in this theory; but I deem it on all grounds most improbable that the principle of imitation has been the only principle concerned in the origin of speech. I have argued that probably

many other principles must have been concerned, including the "synergastic" principle suggested by Noiré, and enthusiastically adopted by my critic as alone sufficient to explain the whole problem of the origin of speech—and this although it is clearly but a particular branch of the general onomatopoetic theory. Hence, so far as I am concerned, it does not signify one iota whether any given root owed its origin to the principle of imitation, or to some other of the general principles which I believe to have been concerned in the birth of articulate language. And, if possible, still less does it signify whether or not in the development of any given word, such as "thunder," the original root-sound has been afterwards imitatively modified, "from a feeling that it should be so." These matters are no doubt of importance within the four corners of philology; but in relation to the "biological theory" of descent they present no importance at all.

Yet I am told:

"Those who cannot see the difference between a man, or for all that, between a mocking-bird, saying Cuckoo, and a whole community fixing on the sound of TAN, as differentiated by various suffixes and prefixes, and expressing the concept of stretching in such words as tonos, tone, tonitru, thunder, tanu, tenuis, thin, should not meddle with the Science of Language." (The Monist, pp. 588-9.)

Doubtless. But as no word of this applies to me, I may be permitted to observe that if any one who has read my book can possibly suppose that it does, he should not meddle with the Science of Thought.

* *

In conclusion, if it be the case that I have completely misapprehended Prof. Max Müller with regard to the points which he has mentioned,—and all of which I have now considered,—have I not furnished sufficient justification? Even now I cannot see in what respects it is possible to amend any subsequent edition of my book, so as to correct the misapprehensions which are alleged. But although my "mistakes" are thus far from "clear," I am glad to have had this opportunity of publicly discussing them with Prof. Max Müller, if only for the sake of adding the following remarks.

Be it observed, in the first place, that whatever may be thought

of the foregoing "justification,"—whether it be held that the misapprehensions are due to ambiguity on the one side or to obtuseness on the other,—at least it is certain that the misapprehensions complained of all have reference to points of no importance whatsoever as regards the general theory of descent, even although some of them are not altogether without importance as regards the particular science of philology. Thus it is quite immaterial, so far as the doctrine of Mental Evolution is concerned, whether we say that the roots of Sanskrit are 800, philologically speaking, or 121, psychologically speaking. Again, as soon as it is explained by Prof. Max Müller that by his "121 original concepts" he means the number of concepts "original" only as regards the Sanskrit language; that by "primitive social man" he means only the semi-civilised progenitors of the Indo-European race; that by "every thought that ever crossed the mind of man" admitting of being "traced back to about 121 simple concepts," he means no more than that such is the case as regards the recent and highly evolved Aryan branch of the human species;—when once all this is explained, it becomes evident that thus far there can be no difference of opinion between For in that case he is not dealing with "the Origin of Human Faculty," either in regard to language or to thought: he is considering merely the higher inflorescence of both. Once more, whether all, or nearly all, the roots of Sanskrit can properly be called words, and, if so, whether we must not go still further and call them verbs, -these are questions of mere terminology. If the roots were originally "used in conversation," and if, as thus used, they were, with but few doubtful exceptions, all expressive of "acts" or "states," it becomes mere verbal hair-splitting to challenge the propriety of saying that the roots were originally verbs. At all events, the matter has nothing to do with the general question of man's derivative origin. Lastly, the same has to be said of the purely philological question as to how far the principle of imitation has obtained in the first formation of these archaic "words," or "roots." For, archaic though they be in a philological sense, in a phylological sense they are things of yesterday, and so can scarcely be said to have any direct relation at all to "the origin of speech," or the rise of articulate sign-making. This has to be inferred from observations in the 'menagerie," as distinguished from research in the library; and the fact that Prof. Max Müller expressly refuses to give me the pleasure of his company where the best materials for studying the really "primitive" condition of the sign-making faculty are to be met with, merely renders more impossible than ever any real collision between his linguistic studies on the one side, and my "biological theory" on the other.

But although it thus appears sufficiently evident that my "misapprehensions" of his linguistic conclusions are as unimportant in relation to the theory of descent as they are few-and, I think, also excusable—in themselves, it is impossible to doubt that far below the level of Sanskrit roots, and far beyond the range of philological science, there is a wide difference of opinion between us. For when he passes from the "Science of Language" to the "Science of Thought,"—when he quits his sphere as a philologist to enter that of the philosopher,—he persistently and consistently affirms that what he calls "the old barrier between man and beast" remains, and that he is as yet unable to perceive how it can ever be removed. This barrier of course is predicative language—the obverse side of conceptional thought; and the firm opinion thus expressed by so eminent a philologist is not only of weight per se, but is rendered more so on account of the manifest freedom from prejudice with which it is associated. It is on this account that I devoted so much space in my book on "Mental Evolution" to a consideration of his views; and therefore I am sorry that his present reply has not been directed to meeting my criticisms on this really important matter of philosophical doctrine, rather than to indicating "misapprehensions" with regard to such merely trivial matters of a purely philological kind as those which I have here been dealing with. But perhaps at some future time he may give me the benefit of his criticism upon my work as a whole, or not merely on the fringes of such details as really have no bearing on the objects of that work.

And, if he should ever see his way to doing this, I am quite sure that the discussion would be one of a friendly character. For the points at issue would all have reference to that large and vague domain of speculative theory touching "the origin of human faculty," where it is inevitable—and, in my judgment, even desirable—that wide differences of opinion should obtain. We are but at the commencement of a great and obscure problem, which only in our own generation has been presented by the science of biology to the contemplation of philosophy. Therefore it would be folly indeed if any man were to regard his own opinions upon it as other than provisional—and even more foolish if he were to introduce any "meum and tuum into these discussions."

Thus I invite Prof. Max Müller to state the grounds of his assertion in The Monist, that "all the facts of real language are against" me as an advocate of what he calls the biological theory of the developmental origin of man. This theory, he says, "derives no support whatever from the Science of Language." I believe, on the other hand, that these are wholly unwarranted statements; and that the Science of Language does support the theory in question to as high a degree as is possible from the nature of the On account of this great difference of opinion, I felt, when writing my book, that I should be doing but scant justice to the matured judgment of so eminent a philologist if I did not carefully consider all that he had written upon the subject. And so, as I have said, I devoted more of my book to a consideration of his views than to those of any other philologist; and while accepting his scientific facts on his authority as a philologist, I nevertheless felt it incumbent on me to show why his philosophical deductions, where they had reference to the theory of descent, appeared to me by no means of equivalent value. This distinction, as I observed at the commencement of the present article, is surely a legitimate distinction; and I should be sorry indeed if anything that I have ever said can appear inconsistent with the genuine admiration which is due to Prof. Max Müller as "a student of language," or with the no less genuine esteem which I have the best reason for knowing is due to him as a friend.

GEORGE. J. ROMANES.